WAR DEPARTMENT : : OFFICE OF THE CHIEF OF STAFF

TECHNICAL NOTES

OF

COAST ARTILLERY TARGET PRACTICE FOR 1915

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WAR DEPARTMENT,
Washington, March 4, 1916.

The following tabulation, giving the mean results obtained with the various lots of powder in use during the Coast Artillery target practice season of 1915, is published for the information of all concerned.

H. L. SCOTT,
Secretary of War, ad interim.

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch,

8-INCH, MODEL 1888.

Lot of powder.	Trial shots.				Velocity assumed.	Projectiles struck (+ over, − short).	Range to target.	Pressure.
	Temperature.		Weight.					
	Powder charges.	Atmosphere.	Powder charges (without igniter).	Projectiles.				
	°	°	*Lbs.* *Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
Du Pont, No. 3, 1905	63	64	82 14	315	2,070	+ 50	4,000	32,227 33,591
	63	64	82 14	314½	2,070	+540	4,000	35,467 38,447
	63	64	82 14	315	2,070	+310	4,000	36,655 36,052
Do	64	61	83 .3	317	2,027	+950	5,000	40,000
	64	61	83 .3	317	2,027	+550	5,000	34,484
	64	61	83 .3	317	2,027	+910	5,000	40,000
L. & R., No. 3, 1908	62	72	85 3	316	2,085	0	8,000	35,000 34,000
	62	72	85 3	316	2,085	0	8,000	37,000 36,500
	62	72	85 3	316	2,085	− 90	8,000	36,000 36,500

results obtained from same during target practice, 1915, with 8-inch, and 14-inch guns.

8-INCH, MODEL 1888.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*				
63	64	82	14	319	2,160	+ 2	3,340	Brumby..	Screven.....	74	Apr. 5
63	64	82	14	318½	2,160	+126	3,280				
63	64	82	14	318	2,160	+120	3,280				
63	64	82	14	316½	2,160	+128	3,250				
63	64	82	14	318	2,160	+123	3,240				
63	64	82	14	317½	2,160	+ 79	3,220				
63	64	82	14	318	2,160	+135	3,020				
63	63	82	14	315½	2,160	− 14	3,990	....do....	.....do.....	74	Apr. 7
63	63	82	14	313	2,160	+378	3,930				
63	63	82	14	313½	2,160	+172	3,930				
63	63	82	14	312½	2,160	− 33	3,820				
63	63	82	14	313	2,160	+207	3,800				
63	63	82	14	314½	2,160	+ 14	3.760				
63	63	82	14	315½	2,160	− 68	3,690				
64	61	83	.3	317	2,210	+220	5,380	McIntosh .	Dade.....	111	Mar. 23
64	61	83	.3	317	2,210	+250	5,380				
64	61	83	.3	317	2,210	−234	5,450				
64	61	83	.3	317	2,210	−108	5,470				
64	61	83	.3	317	2,210	+ 25	5,540				
64	61	83	.3	317	2,210	+ 16	5,540				
64	61	83	.3	317	2,210	− 96	5,600				
60	53	83	.3	317	2,160	+201	3,840	....do....	.....do.....	111	Mar. 24
60	53	83	.3	317	2,160	+145	3,840				
60	53	83	.3	317	2,160	+276	3,980				
60	53	83	.3	317	2,160	+292	4,100				
60	53	83	.3	317	2,160	+148	4,100				
60	53	83	.3	317	2,160	+320	4,320				
60	53	83	.3	317	2,160	+202	4,320				
62	73	85	3	316½	2,080	+ 95	8,160	Weymouth.	McKinley....	8	July 7
62	73	85	3	316	2,080	− 81	8,130				
62	73	85	3	316	2,080	−117	8,110				
62	73	85	3	316	2,080	− 27	8,060				
62	73	85	3	316	2,080	−116	8,040				
62	73	85	3	316	2.080	+334	7,960				
62	73	85	3	316	2,080	−157	7.950				
62	70	85	3	315	2,080	+228	5,090	....do....	.....do.....	8	Do.
62	70	85	3	316½	2,080	− 92	5,070				
62	70	85	3	316½	2,080	+ 55	4,960				
62	70	85	3	315½	2,080	+102	4,940				
62	70	85	3	317½	2,080	+181	5,660				
62	70	85	3	314½	2,080	+ 75	5,600				
62	70	85	3	315½	2,080	+ 6	5,580				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

8-INCH, MODEL 1888—Continued.

COMPOUND BLENDING.

Lot of powder.	Trial shots. Temperature. Powder charges.	Trial shots. Temperature. Atmosphere.	Trial shots. Weight. Powder charges (without igniter).		Trial shots. Weight. Projectiles.	Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
Du Pont, No. 3, 1905	64½	74	80	10.9	316½	2,170	+380	7,700	41,400
Du Pont, No. 60, 1911	64½	74	80	10.9	316½	2,170	+160	7,700	39,200
	64½	74	80	10.9	316½	2,170	+130	7,700	42,100
10-INCH, MODEL 1888.									
C. P. W., No. 9, 1904	58	60	155	8.8	605	2,187	+365	11,000	38,200 37,470
	58	60	155	8.8	605	2,187	+150	11,000	35,400 36,470
	58	60	155	8.8	605	2,187	+170	11,000	38,110

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

8-INCH, MODEL 1888—Continued.

COMPOUND BLENDING.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+ over, − short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*				
64½	69	80	10.9	316½	2,215	−205	8,860				
64½	69	80	10.9	316½	2,215	−205	8,770				
64½	69	80	10.9	316½	2,215	−208	8,580				
64½	69	80	10.9	316½	2,215	−202	8,500	Barton....	Rodman.....	52	July 28
64½	69	80	10.9	316½	2,215	−198	8,330				
64½	69	80	10.9	316½	2,215	−220	8,070				
64½	69	80	10.9	316½	2,215	− 58	8,150				
64½	68	80	10.9	316½	2,215	+ 85	5,170				
64½		80	10.9	317	2,215	−193	5,090				
64½		80	10.9	317	2,215	−147	5,010				
64½	and	80	10.9	317	2,215	−198	5,690	....do....	.....do.....	52	July 29
64½		80	10.9	317	2,215	−206	5,610				
64½		80	10.9	317	2,215	+150	5,465				
64½	72	80	10.9	317	2,215	−193	5,390				

10-INCH, MODEL 1888.

58	60	155	8.8	605½	2,227	+ 4	11,107				
58	60	155	8.8	605	2,227	− 64	11,175				
58	60	155	8.8	605¼	2,227	−127	11,290				
58	60	155	8.8	605	2,227	+ 84	11,700	Revere....	Flagler.....	94	July 9
58	60	155	8.8	605	2,227	+ 57	11,710				
58	60	155	8.8	605	2,227	− 88	11,862				
58	60	155	8.8	605¾	2,227	− 23	11,910				
58	58	155	8.8	605¼	2,222	+ 62	7,023				
58	58	155	8.8	604½	2,222	− 96	7,260				
58	58	155	8.8	605½	2,222	−152	7,613				
58	58	155	8.8	605¼	2,222	−347	7,660	....do....	.....do.....	94	July 14
58	58	155	8.8	604½	2,222	−172	7,787				
58	58	155	8.8	604¼	2,222	−181	7,893				
58	58	155	8.8	604	2,222	−240	7,920				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

10-INCH, MODEL 1888—Continued.

Lot of powder.	Trial shots. Temperature. Powder charges.	Trial shots. Temperature. Atmosphere.	Trial shots. Weight. Powder charges (without igniter).		Trial shots. Weight. Projectiles.	Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
L. & R., No. 6, 1905	64	75	160	7	604	2,270	−265	7,000	34,300 33,200
	64	75	160	7	604	2,270	−450	7,000	34,150 37,350
	64	75	160	7	604	2,270	−305	7,000	34,800 34,100
Int. No. 4, 1906	70	70	158	2	604	2,235	+520	10,000	40,000
	70	70	158	2	604	2,235	− 20	10,000	38,000
	70	70	158	2	604	2,235	+160	10,000	38,000
Do	71	69	157	10	604	2,250	−190	9,950	37,220 37,474
	71	69	157	10	604	2,250	+120	9,950	38,250 39,018
	71	69	157	10	604	2,250	+210	9,950	39,910 40,446

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

10-INCH, MODEL 1888—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short)	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
64	70	160	7	604	2,200	+170	10,095				
64	70	160	7	604	2,200	−359	10,050				
64	70	160	7	604	2,200	−147	10,030				
64	70	160	7	604	2,200	− 26	9,980	Barlow...	H. G. Wright.	2	Aug. 17
64	70	160	7	604	2,200	−172	9,980				
64	70	160	7	604	2,200	− 37	9,915				
64	70	160	7	604	2,200	−275	9,900				
64	73	160	7	604	2,200	+213	5,125				
64	73	160	7	604	2,200	+135	5,065				
64	73	160	7	604	2,200	+137	5,025				
64	73	160	7	604	2,200	+ 31	4,940	....do....	.....do.....	2	Aug. 19
64	73	160	7	604	2,200	0	4,895				
64	73	160	7	604	2,200	+ 68	4,740				
64	73	160	7	604	2,200	+323	4,730				
70	70	158	2	604	2,250	− 78	10,735				
70	70	158	2	604	2,250	+230	10,785				
70	70	158	2	604	2,250	+152	10,800				
70	70	158	2	604	2,250	+262	10,860	Calef.....	Rosecrans....	30	July 27
70	70	158	2	604	2,250	+144	10,865				
70	70	158	2	604	2,250	+214	10,920				
70	70	158	2	604	2,250	+155	10,910				
70	65	158	2	604	2,272	+ 3	6,780				
70	65	158	2	604	2,272	− 24	6,820				
70	65	158	2	604	2,272	+ 54	6,830				
70	65	158	2	604	2,272	− 13	6,880	....do....	.....do.....	30	July 30
70	65	158	2	604	2,272	+110	6,870				
70	65	158	2	604	2,272	−225	6,950				
70	65	158	2	604	2,272	+ 53	6,930				
71	69	157	10	604	2,258	−465	10,320				
71	69	157	10	604	2,258	+107	10,290				
71	69	157	10	604	2,258	−140	10,390				
71	69	157	10	604	2,258	+210	10,360	Wilkeson .	.....do.....	115	July 27
71	69	157	10	604	2,258	+ 53	10,390				
71	69	157	10	604	2,258	+ 47	10,370				
71	69	157	10	604	2,258	−174	10,400				
73	64	157	10	604	2,260	+119	7,010				
73	64	157	10	604	2,260	+ 24	6,950				
73	64	157	10	604	2,260	+393	6,560				
73	64	157	10	604	2,260	+ 55	6,510	....do....	.....do.....	115	July 30
73	64	157	10	604	2,260	+346	6,540				
73	64	157	10	604	2,260	− 35	6,490				
73	64	157	10	604	2,260	+225	6,520				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

10-INCH, MODEL 1888—Continued.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
L. & R. No. 8. 1907	66	75	152	0	604	2,210	−495	7,500	32,000 32,000
	66	75	152	0	604	2,210	−495	7,500	36,450 32,000
	66	75	152	0	604	2,210	−495	7,500	33,000 33,500
Du Pont, No. 13, 1908	56	69	161	9	602½	2,217	+ 80	8,000	36,597
	56	69	161	9	602½	2,217	+ 40	8,000	36,564
	56	69	161	9	602½	2,217	+ 20	8,000	36,742
Do	52	69	80	12½	602½	2,220	+ 98	7,945	32,240 32,400
	52	69	80	12½	602½	2,220	− 34	7,945	36,900 36,850
	52	69	80	12½	602½	2,220	−164	7,945	36,600 36,000

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

10-INCH, MODEL 1888—Continued.

Record shots.					Velocity used.	Projectiles struck (+ over, − short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.							
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
66	77	152	0	604	2,115	+200	7,340				
66	77	152	0	603	2,115	+ 94	7,305				
66	77	152	0	604	2,115	+ 90	7,305				
66	77	152	0	604	2,115	+115	7,255	Cullum	Pickens	15	Apr. 26
66	77	152	0	603	2,115	+110	7,130				
66	77	152	0	603	2,115	0	6,935				
66	77	152	0	603	2,115	+173	5,820				
66	73	152	0	604	2,110	+236	5,250				
		152	0	604	2,110	+288	5,795				
		152	0	604	2,110	+360	8,455				
and	and	152	0	604	2,110	+108	8,360	do	do	15	Apr. 30
		152	0	602	2,110	+130	8,360				
		152	0	603	2,110	+243	8,282				
70	79	152	0	603	2,110	+192	8,190				
56	71	161	9	603	2,225	+ 19	10,280				
56	71	161	9	603	2,225	−145	10,200				
56	71	161	9	603	2,225	+478	10,120				
56	71	161	9	601	2,225	−163	10,050	DeHart	Williams	5	July 6
56	71	161	9	602	2,225	−268	9,970				
56	71	161	9	602	2,225	−296	9,890				
56	71	161	9	601½	2,225	0	9,850				
56	72	161	9	603	2,214	−178	6,850				
56	72	161	9	603	2,214	− 6	6,770				
56	72	161	9	603	2,214	+114	6,700				
56	72	161	9	603	2,214	+ 25	6,610	do	do	5	Do.
56	72	161	9	602	2,214	−114	6,540				
56	72	161	9	601	2,214	+338	6,390				
56	72	161	9	602	2,214	+ 14	6,310				
52	70	80	12½	603½	2,214	−225	9,930				
52	70	80	12½	601½	2,214	+ 3	9,890				
52	70	80	12½	603½	2,214	−263	9,780				
52	70	80	12½	604½	2,214	−270	9,780	Sullivan	do	89	Do.
52	70	80	12½	603½	2,214	−174	9,700				
52	70	80	12½	602	2,214	− 72	9,660				
52	70	80	12½	601½	2,214	−116	9,560				
52	70	80	12½	603	2,214	−227	7,610				
52	70	80	12½	603½	2,214	+287	7,550				
52	70	80	12½	602½	2,214	−255	7,550				
52	70	80	12½	603	2,214	+176	7,460	do	do	89	Do.
52	70	80	12½	602½	2,214	−295	7,460				
52	70	80	12½	603	2,214	−218	7,405				
52	70	80	12½	603	2,214	−194	7,310				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

10-INCH, MODEL 1888—Continued.

Lot of powder.	Trial shots.				Velocity assumed.	Projectiles struck (+ over, − short).	Range to target.	Pressure.
	Temperature.		Weight.					
	Powder charges.	Atmosphere.	Powder charges (without igniter).	Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
L. & R., No. 10, 1908	62	86	165	15	601	2,195	0	10,000	32,500 32,000
	62	86	165	15	601	2,195	+ 50	10,000	34,300 34,500
	62	86	165	15	601	2,195	− 5	10,000	34,900 34,000
DuPont, No. 82, 1911	65	76	168	5	603	2,234	+ 70	8,380	35,933
	65	76	168	5	603	2,234	− 50	8,380	36,603
	65	76	168	5	602¾	2,234	−415	8,380	36,103
Do	65	71	159	7	603	2,234	− 72	8,380	33,937
	65	71	159	7	603	2,234	−158	8,380	33,890
	65	71	159	7	603	2,234	−310	8,380	34,661

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

10-INCH, MODEL 1888—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*				
63	85	165	15	601½	2,198	− 90	10,780				
63	85	165	15	600½	2,198	− 83	10,750				
63	85	165	15	601½	2,198	− 7	10,730				
63	85	165	15	601	2,198	+ 38	10,660	Granger	Hancock	113	July 19
63	85	165	15	601	2,198	−119	10,650				
63	85	165	15	600½	2,198	−104	10,640				
63	85	165	15	602½	2,198	−119	10,620				
63	77	165	15	602½	2,186	−180	11,010				
63	77	165	15	602½	2,186	−335	10,990				
63	77	165	15	600½	2,186	−388	10,950				
63	77	165	15	601½	2,186	−422	10,850	do	do	113	July 20
63	77	165	15	601½	2,186	−160	10,820				
63	77	165	15	602½	2,186	−353	10,790				
63	77	165	15	601½	2,186	−203	10,730				
69	79	168	5	602½	2,225	− 3	9,120				
69	79	168	5	602	2,225	−316	9,050				
69	79	168	5	602	2,225	− 59	9,050				
69	79	168	5	602	2,225	+373	9,010	Hale	Greble	102	Aug. 10
69	79	168	5	603	2,225	+186	9,030				
69	79	168	5	602½	2,225	−116	8,970				
69	79	168	5	602	2,225	+263	8,970				
69	76	168	5	603	2,225	+ 77	10,300				
69	76	168	5	602	2,225	+232	10,210				
69	76	168	5	602¾	2,225	−151	10,110				
69	76	168	5	603	2,225	+ 27	10,040	do	do	102	Do.
69	76	168	5	602¾	2,225	−135	9,940				
69	76	168	5	603	2,225	−234	9,970				
69	76	168	5	602½	2,225	−432	9,840				
68	75	159	7	603	2,217	− 45	9,835				
68	75	159	7	603	2,217	+ 84	9,830				
68	75	159	7	603	2,217	+ 49	9,695				
68	75	159	7	603	2,217	−127	9,665	do	do	109	Do.
68	75	159	7	603	2,217	−244	9,675				
68	75	159	7	603	2,217	+ 82	9,675				
68	75	159	7	603	2,217	− 92	9,750				
68	76	159	7	603	2,217	− 49	11,190				
68	76	159	7	603	2,217	+ 15	11,210				
68	76	159	7	603	2,217	−307	11,130				
68	76	159	7	603	2,217	+451	11,130	do	do	109	Do.
68	76	159	7	603	2,217	− 85	11,070				
68	76	159	7	603	2,217	+164	11,070				
68	76	159	7	603	2,217	+176	10,900				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

10-INCH, MODEL 1888—Continued.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
P. A. No. 75, 1912	62	72	157	5	604	2,263	+ 65	10,065	31,250 32,650
	62	72	157	5	604	2,263	+285	10,065	33,000 33,275
	62	72	157	5	604	2,263	− 75	10,065	33,500 32,200
P. A. No. 132, 1913	59	52	152	6	604	2,230	+230	8,420	37,790 38,032
	59	52	152	6	604	2,230	−110	8,420	35,466 34,969
	59	52	152	6	604	2,230	−140	8,420	34,754 32,716
Do	54	55	154	4	604	2,222	− 40	8,400	35,050 34,700
	54	55	154	4	604	2,222	− 30	8,400	36,000 35,800
	54	55	154	4	604	2,222	− 10	8,400	35,050 36,000

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

10-INCH, MODEL 1888—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
62	73	157	5	604	2,276	+ 69	10,340				
62	73	157	5	604	2,276	−389	9,810				
62	73	157	5	604	2,276	−506	9,810				
62	73	157	5	604	2,276	−288	9,790	Steele	Terry	125	Aug. 26
62	73	157	5	604	2,276	−208	9,790				
62	73	157	5	604	2,276	−340	9,780				
62	73	157	5	604	2,276	−467	9,780				
62	63	157	5	604	2,276	−116	5,640				
62	63	157	5	604	2,276	−206	5,640				
62	63	157	5	604	2,276	−323	5,470				
62	63	157	5	604	2,276	−323	5,470	do	do	125	Do.
62	63	157	5	604	2,276	+443	5,480				
62	63	157	5	604	2,276	−168	5,480				
62	63	157	5	604	2,276	−233	5,290				
59	52	152	6	604	2,228	− 17	9,400				
59	52	152	6	604	2,228	+ 32	9,460				
59	52	152	6	604	2,228	−240	9,460				
59	52	152	6	604	2,228	−220	9,570	Hitchcock	Strong	46	Nov. 11
59	52	152	6	604	2,228	− 65	9,570				
59	52	152	6	604	2,228	+ 52	9,580				
59	52	152	6	604	2,228	−234	9,580				
59	52	152	6	604	2,228	+152	10,310				
59	52	152	6	604	2,228	− 50	10,230				
59	52	152	6	604	2,228	− 35	10,230				
59	52	152	6	604	2,228	− 43	10,150	do	do	46	Do.
59	52	152	6	604	2,228	−277	10,150				
59	52	152	6	604	2,228	− 15	10,100				
59	52	152	6	604	2,228	−122	10,100				
54	53	154	4	604	2,218	+203	10,060				
54	53	154	4	604	2,218	+157	10,180				
54	53	154	4	604	2,218	− 30	10,180				
54	53	154	4	604	2,218	+152	10,250	Ward	do	83	Do.
54	53	154	4	604	2,218	−153	10,330				
54	53	154	4	604	2,218	+252	10,730				
54	53	154	4	604	2,218	− 34	10,590				
54	53	154	4	604	2,218	−128	9,780				
54	53	154	4	604	2,218	+ 38	9,760				
54	53	154	4	604	2,218	+362	9,720				
54	53	154	4	604	2,218	− 86	9,660	do	do	83	Do.
54	53	154	4	604	2,218	+139	9,610				
54	53	154	4	604	2,218	+113	9,430				
54	53	154	4	604	2,218	−207	9,350				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

10-INCH, MODEL 1888—Continued.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
P. A., Lot E, 1914	76	91	161	2	604	2,260	+220	10,000	37,833 36,050
	76	91	161	2	604	2,260	−340	10,000	34,261 33,193
	76	91	161	2	604	2,260	0	10,000	33,935 36,550
Do	79	91	164	8	604	2,330	−672	11,000	33,900
	79	91	164	8	604	2,330	−630	11,000	32,500
	79	91	164	8	604	2,330	−760	11,000	33,600

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

10-INCH, MODEL 1888—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+ over, − short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*				
75	91	161	2	604	2,265	+ 32	10,810				
75	91	161	2	604		+113	10,580				
75	91	161	2	604		+225	10,450				
75	91	161	2	604	and	+ 60	10,320	Eustis.....	Monroe.....	47	July 30–31
75	91	161	2	604		− 10	10,940				
75	91	161	2	604		+208	10,775				
75	91	161	2	604	2,282	−245	10,665				
80	84	161	2	604	2,285	−125	5,700				
80	84	161	2	604	2,285	−112	5,650				
80	84	161	2	604	2,285	+ 28	5,635				
80	84	161	2	604	2,285	+ 55	5,580	....do....	.....do.....	47	Aug. 2
80	84	161	2	604	2,285	+ 67	5,580				
80	84	161	2	604	2,285	+208	5,480				
80	84	161	2	604	2,285	+ 68	5,355				
79	91	164	8	604	2,210	+ 54	11,485				
79	91	164	8	604	2,210	− 26	11,395				
79	91	164	8	604	2,210	+160	11,345				
79	91	164	8	604	2,210	− 49	11,245	....do....	.....do.....	73	July 12
79	91	164	8	604	2,210	−189	11,205				
79	91	164	8	604	2,210	−104	11,095				
79	91	164	8	604	2,210	+ 80	11,055				
79	84	164	8	604	2,210	− 3	5,605				
79	84	164	8	604	2,210	+170	5,555				
79	84	164	8	604	2,210	+ 52	5,525				
79	84	164	8	604	2,210	+ 52	5,485	....do....	.....do.....	73	July 16
79	84	164	8	604	2,210	+ 52	5,445				
79	84	164	8	604	2,210	+ 70	5,395				
79	84	164	8	604	2,210	+130	5,305				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

10-INCH, MODEL 1888—Continued.

COMPOUND BLENDING.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
L. & R., No. 1, 1901	68	85	154	2	604	2,200	−160	10,010	33,060 33,060
Cal., No. 5, 1901	68	85	154	2	604	2,200	−170	10,010	33,000 33,000
P. A., No. 1. 1909	68	85	154	2	604	2,200	−150	10,010	33,094 33,094
L. & R., No. 8, 1907	66	79	152	4	604	2,193	−150	9,500	32,000 32,200
L. & R., No. 11, 1908	66	79	152	4	604	2,193	+ 10	9,500	35,600 35,000
	66	79	152	4	604	2,193	−400	9,500	34,000 34,500
L. & R., No. 10, 1908	66	64	157	0	601	2,195	+ 40	10,000	34,500
DuPont, No. 23, 1910	66	64	157	0	601	2,195	+ 40	10,000	34,500
	66	64	157	0	601	2,195	+115	10,000	34,800

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

10-INCH, MODEL 1888—Continued.

COMPOUND BLENDING.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+ over, − short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
68	81	154	2	604	2,175	− 40	10,320				
68	81	154	2	604	2,175	+ 43	10,000				
68	81	154	2	604	2,175	− 87	9,980				
68	81	154	2	604	2,175	− 35	9,930	Granger...	Hancock.....	87	Aug. 16
68	81	154	2	604	2,175	−118	9,590				
68	81	154	2	604	2,175	+ 75	9,580				
68	81	154	2	604	2,175	− 72	9,530				
68	81	154	2	604	2,175	− 19	8,020				
68	81	154	2	604	2,175	−212	8,010				
68	81	154	2	604	2,175	− 43	8,020				
68	81	154	2	604	2,175	− 60	8,020	....do....	.....do.....	87	Do.
68	81	154	2	604	2,175	+ 50	8,030				
68	81	154	2	604	2,175	−112	8,030				
68	81	154	2	604	2,175	−107	8,030				
66	80	152	4	604	2,153	17	8,900				
66	80	152	4	604	2,153	−350	8,735				
66	80	152	4	604	2,153	− 17	8,670				
66	80	152	4	604	2,153	−330	8,660	Jasper.....	Moultrie.....	145	May 14
66	80	152	4	604	2,153	+ 82	8,560				
66	80	152	4	604	2,153	− 3	8,510				
66	80	152	4	604	2,153	+ 60	8,350				
67	84	152	4	604	2,150	+ 3	8,180				
67	84	152	4	604	2,150	+185	8,130				
67	84	152	4	604	2,150	+195	8,000				
67	84	152	4	604	2,150	− 91	7,850	....do.....	.....do.....	145	May 17
67	84	152	4	604	2,150	+515	7,810				
67	84	152	4	604	2,150	− 29	7,780				
67	84	152	4	604	2,150	+222	7,650				
66	82	157	0	601	2,205	− 58	10,270				
66	82	157	0	601	2,205	− 85	10,220				
66	82	157	0	601	2,205	− 18	10,170				
66	82	157	0	601	2,205	− 45	10,120	Granger...	Hancock.....	98	Aug. 9
66	82	157	0	601	2,205	− 42	10,120				
66	82	157	0	601	2,205	− 72	10,060				
66	82	157	0	601	2,205	−135	9,900				
66	82	157	0	601	2,195	− 92	7,940				
66	82	157	0	601	2,195	−115	7,900				
66	82	157	0	601	2,195	− 97	7,850				
66	82	157	0	601	2,195	− 60	7,800	....do.....	.....do.....	98	Aug. 10
66	82	157	0	601	2,195	− 10	7,800				
66	82	157	0	601	2,195	− 58	7,760				
66	82	157	0	601	2,195	−103	7,450				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

10-INCH, MODEL 1895.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
C. P. W., No. 10, 1904....	57	60	155	8	604	2,236	+460	10,940	37,000 38,000
	57	60	155	8	604	2,236	+140	10,940	33,500 35,300
	57	59	155	8	604	2,236	+160	10,940	37,600 36,500
Do.....	59	71	155	8	604	2,235	+260	11,000	37,652 36,750
	59	68	155	8	604	2,235	−130	11,000	39,589 36,333
	59	68	155	8	604	2,235	−280	11,000	38,793 36,750
L. & R., No. 8, 1907.....	72	75	151	12	602½	2,205	+160	6,500	39,865
	72	75	151	12	602½	2,205	+215	6,500	39,480
	72	75	151	12	602½	2,205	+255	6,500	40,000

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

10-INCH, MODEL 1895.

Record shots.												
Temperature.		Weight.										
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
57	63	155	8	604	2,279	+258	11,860				
57	63	155	8	604	2,279	+155	11,980				
57	63	155	8	604	2,279	+ 19	11,930				
57	63	155	8	604	2,279	0	11,730	Worth	Worden	71	July 8
57	63	155	8	604	2,279	− 26	11,680				
57	63	155	8	604	2,279	+ 15	11,600				
57	63	155	8	604	2,279	− 7	11,460				
58	53	155	8	604	2,280	− 68	7,220				
58	53	155	8	604	2,280	−112	7,220				
58	53	155	8	604	2,280	−153	7,390				
58	53	155	8	604	2,280	− 58	7,420	do	do	71	July 12–13
58	53	155	8	604	2,280	−105	7,480				
58	53	155	8	604	2,280	− 67	7,510				
58	53	155	8	604	2,280	−184	7,580				
59	64	155	8	604	2,236	+260	10,650				
59	64	155	8	604	2,236	+155	10,740				
59	64	155	8	604	2,236	− 77	10,740				
59	64	155	8	604	2,236	− 24	10,830	Moore	Casey	85	July 8
59	64	155	8	604	2,236	− 20	10,920				
59	64	155	8	604	2,236	− 27	10,970				
59	64	155	8	604	2,236	− 63	10,990				
59	53	155	8	604	2,236	+186	7,010				
59	53	155	8	604	2,236	+126	7,170				
59	53	155	8	604	2,236	+187	7,580				
59	53	155	8	604	2,236	+ 44	7,600	do	do	85	July 12
59	53	155	8	604	2,236	−132	7,640				
59	53	155	8	604	2,236	− 40	7,690				
59	53	155	8	604	2,236	− 82	7,740				
72	75	151	12	602½	2,250	− 15	4,720				
72	75	151	12	602½	2,250	+ 45	4,700				
72	75	151	12	602½	2,250	+ 18	4,560				
72	75	151	12	602½	2,250	+110	4,550	Hampton	Crockett	128	May 3
72	75	151	12	602½	2,250	+ 73	4,450				
72	75	151	12	602½	2,250	+ 22	4,450				
72	75	151	12	602½	2,250	− 40	4,420				
68	72	151	12	602½	2,242	+ 85	5,750				
68	72	151	12	602½	2,242	+620	5,650				
68	72	151	12	602½	2,242	+427	5,520				
68	72	151	12	604	2,242	+480	5,000	do	do	128	May 7
68	72	151	12	604	2,242	Lost	4,910				
68	72	151	12	604	2,242	− 5	4,800				
68	72	151	12	604	2,242	+125	4,870				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

10-INCH, MODEL 1895—Continued.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
P. A., Lot E, 1914.....	80	84	161	8	604	2,290	− 30	10,000	33,032
	80	84	161	8	604	2,290	−335	10,000	35,000
	80	84	161	8	604	2,290	−415	10,000	35,351

10-INCH, MODEL 1900.

COMPOSITE BLENDING.

DuPont, No. 3, 1901.....	60	60	169	11½	605	2,290	+ 10	9,420	.....
									32,500
DuPont, No. 1, 1904.....	60	60	169	11½	605	2,290	+ 40	9,420	30,000
									32,000
DuPont, No. 8, 1904.....	60	60	169	11½	605	2,290	− 20	9,420	29,000
									.....

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

10-INCH, MODEL 1895—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+ over, − short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*				
80	84	161	8	604	2,245	+310	11,070	Church....	Monroe.....	118	July 12
80	84	161	8	604	2,245	+ 14	11,060				
80	84	161	8	604	2,245	+ 17	10,650				
80	84	161	8	604	2,245	− 8	10,610				
80	84	161	8	604	2,245	+ 47	10,580				
80	84	161	8	604	2,245	0	10,460				
80	84	161	8	604	2,245	−127	10,420				
95	81	161	8	604	2,290	− 20	6,145	...do.....	.....do.....	118	July 16
95	81	161	8	604	2,290	+ 47	6,125				
95	81	161	8	604	2,290	− 65	6,045				
95	81	161	8	604	2,290	+ 60	5,800				
95	81	161	8	604	2,290	+ 3	5,775				
95	81	161	8	604	2,290	− 55	5,680				
95	81	161	8	604	2,290	+147	5,705				

10-INCH, MODEL 1900.

COMPOSITE BLENDING.

60	63	169	11½	605	2,290	+ 12	10,360	Benson....	Worden.....	62	July 6
60	63	169	11½	605	2,290	− 25	10,400				
60	63	169	11½	605	2,290	−150	10,450				
60	63	169	11½	605	2,290	− 80	11,330				
60	63	169	11½	605	2,290	−225	11,350				
60	63	169	11½	605	2,290	−165	11,490				
60	63	169	11½	605	2,290	−160	11,580				
60	65	169	11½	605	2,290	−146	6,295	...do.....	.....do.....	62	July 7
60	65	169	11½	605	2,290	0	6,375				
60	65	169	11½	605	2,290	− 90	6,465				
60	65	169	11½	605	2,290	− 70	6,685				
60	65	169	11½	605	2,290	0	6,795				
60	65	169	11½	605	2,290	+150	6,785				
60	65	169	11½	605	2,290	−215	7,770				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

12-INCH, MODEL 1888.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
P. A., No. 135, 1914.....	56	49	273	1	1,046	2,210	−950	10,000	30,800
	56	49	273	1	1,046	2,210	−730	10,000	31,000
	56	49	273	1	1,046	2,210	−660	10,000	30,800
P. A., No. 165, 1914.....	72	72	268	14½	1,046	2,100	−138	9,995	28,530
	72	72	268	14½	1,046	2,100	−105	9,995	30,120
	72	72	268	14½	1,046	2,100	− 95	9,995	30,060
P. A., Lot F, 1915.....	60	72	273	0	1,046	2,217	+480	9,998	38,691
	60	72	273	0	1,046	2,217	+365	9,998	38,975
	60	72	273	0	1,046	2,217	+350	9,998	39,485

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

12-INCH, MODEL 1888.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
56	49	273	1	1,046	2,090	+ 398	10,610				
56	49	273	1	1,046	2,090	− 232	10,526				
56	49	273	1	1,046	2,090	+ 47	10,370				
56	49	273	1	1,046	2,090	+ 762	10,310	Stevenson.	Warren....	7	Nov. 10
56	49	273	1	1,046	2,090	+ 292	10,210				
56	49	273	1	1,046	2,090	+1,010	10,210				
56	49	273	1	1,046	2,090	+ 96	10,160				
56	48	273	1	1,046	2,100	− 22	9,380				
56	48	273	1	1,046	2,100	+ 624	9,350				
56	48	273	1	1,046	2,100	+ 146	9,340				
56	48	273	1	1,046	2,100	+ 61	9,340	....do.....	.....do.....	7	Do.
56	48	273	1	1,046	2,100	+ 633	9,330				
56	48	273	1	1,046	2,100	+ 141	9,350				
56	48	273	1	1,046	2,100	− 134	9,370				
72	75	268	14½	1,046	2,082	− 212	10,120				
72	75	268	14½	1,046	2,082	+ 82	9,865				
72	75	268	14½	1,046	2,082	− 57	10,420				
72	75	268	14½	1,046	2,082	+ 70	10,360	Bloomfield	Hancock...	56	Sept. 18
72	75	268	14½	1,046	2,082	− 164	10,360				
72	75	268	14½	1,046	2,082	+ 117	10,300				
72	75	268	14½	1,046	2,082	+ 78	10,300				
72	72	268	14½	1,046	2,082	− 43	9,460				
72	72	268	14½	1,046	2,082	+ 93	9,390				
72	72	268	14½	1,046	2,082	+ 83	9,340				
72	72	268	14½	1,046	2,082	+ 78	9,290	....do....	...do.....	56	Do.
72	72	268	14½	1,046	2,082	+ 47	9,200				
72	72	268	14½	1,046	2,082	+ 115	9,140				
72	72	268	14½	1,046	2,082	+ 24	9,100				
60	72	273	0	1,046	2,281	− 360	10,100				
60	72	273	0	1,046	2,281	+ 270	10,000				
60	72	273	0	1,046	2,281	− 397	9,900				
60	72	273	0	1,046	2,281	− 165	9,800	Berry.....	McKinley..	1	July 7
60	72	273	0	1,046	2,281	− 224	9,560				
60	72	273	0	1,046	2,281	− 34	9,490				
60	72	273	0	1,046	2,281	− 353	9,380				
60	70	273	0	1,046	2,281	− 289	6,190				
60	70	273	0	1,046	2,281	+ 112	6,080				
60	70	273	0	1,046	2,281	− 55	6,500				
60	70	273	0	1,046	2,281	+ 171	6,400	....do....	.....do.....	1	Do.
60	70	273	0	1,046	2,281	+ 173	6,290				
60	70	273	0	1,046	2,281	+ 94	6,200				
60	70	273	0	1,046	2,281	+ 100	6,100				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

12-INCH, MODEL 1888—Continued.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, —short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
P. A., Lot F, 1915	58	68	273	0	1,046	2,213	+300	10,000	39,000 40,000
	58	68	273	0	1,046	2,213	+770	10,000	43,000 43,000
	58	68	273	0	1,046	2,213	+ 10	10,000	35,200 35,900
COMPOUND BLENDING.									
C. P. W., No. 2, 1900	59	61	259	8	1,048	2,220	+300	11,020	41,340 44,900
C. P. W., No. 5, 1901	59	61	259	8	1,048	2,220	+ 80	11,020	42,600 43,800
C. P. W., No. 7, 1902	59	61	259	8	1,048	2,220	+250	11,020	45,600 45,200
P. A., No. 36, 1910	70	68	274	0	1,046	2,200	+ 40	10,000	35,000
Int., No. 29, 1910	70	68	274	0	1,046	2,200	+620	10,000	38,611
	70	68	274	0	1,046	2,200	+900	10,000	43,700

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

12-INCH, MODEL 1888—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
58	68	273	0	1,046	2,272	+415	10,270	Berry	McKinley	50	July 7
58	68	273	0	1,046	2,272	+237	10,150				
58	68	273	0	1,046	2,272	+293	10,000				
58	68	273	0	1,046	2,272	+190	9,870				
58	68	273	0	1,046	2,272	+128	9,730				
58	68	273	0	1,046	2,272	+228	9,560				
58	68	273	0	1,046	2,272	+205	9,425				
58	65	273	0	1,046	2,272	+115	6,640	do	do	50	Do.
58	65	273	0	1,046	2,272	−200	6,880				
58	65	273	0	1,046	2,272	−282	6,730				
58	65	273	0	1,046	2,272	+298	6,550				
58	65	273	0	1,046	2,272	+152	6,440				
58	65	273	0	1,046	2,272	−343	6,310				
58	65	273	0	1,046	2,272	−347	6,190				
COMPOUND BLENDING.											
59	61	259	8	1,048	2,262	− 5	10,770	Wilhelm	Flagler	26	July 9
59	61	259	8	1,048	2,262	−338	10,800				
59	61	259	8	1,048	2,262	− 29	11,400				
59	61	259	8	1,048	2,262	−469	11,430				
59	61	259	8	1,048	2,262	− 57	9,900				
59	61	259	8	1,048	2,262	−588	9,980				
59	61	259	8	1,048	2,262	+ 52	10,150				
59	58	259	8	1,048	2,252	+105	6,260	do	do	26	July 14
59	58	259	8	1,048	2,252	+ 68	6,340				
59	58	259	8	1,048	2,252	+ 88	6,480				
59	58	259	8	1,048	2,252	− 62	6,440				
59	58	259	8	1,048	2,252	− 71	6,550				
59	58	259	8	1,048	2,252	+ 51	6,540				
59	58	259	8	1,048	2,252	−323	6,440				
70	73	274	0	1,046	2,305	+ 55	10,890	Duportail	Morgan	39	Dec. 15
70	73	274	0	1,046	2,305	+112	10,810				
70	73	274	0	1,046	2,305	+ 60	10,720				
70	73	274	0	1,046	2,305	+150	10,450				
70	73	274	0	1,046	2,305	+105	10,350				
70	73	274	0	1,046	2,305	-2000	10,310				
70	73	274	0	1,046	2,305	+225	10,230				
70	71	274	0	1,046	2,319	+126	7,070	do	do	39	Dec. 16
70	71	274	0	1,046	2,319	+ 36	6,940				
70	71	274	0	1,046	2,319	+107	6,790				
70	71	274	0	1,046	2,319	+ 94	6,640				
70	71	274	0	1,046	2,319	+ 58	6,510				
70	71	274	0	1,046	2,319	+ 90	6,390				
70	71	274	0	1,046	2,319	− 55	6,290				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

12-INCH, MODEL 1895.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
Int., No. 3, 1904	68	84	273	8	1,046	2,268	Lost.	10,500	36,484 36,484
	68	80	273	8	1,046	2,268	−130	10,500	36,413 36,323
	68	80	273	8	1,046	2,268	− 65	10,500	35,841 35,363
P. A., No. 1, 1909	82	80	276	0	1,046	2,260	−256	8,397	36,000 34,870
	82	80	276	0	1,046	2,260	+ 64	8,397	38,750 39,350
	82	80	276	0	1,046	2,260	−316	8,397	35,635 35,550
Do	80	80	272	0	1,046	2,242	−502	7,892	33,484 33,250
	80	80	272	0	1,046	2,242	−347	7,892	35,532 35,111
	80	80	272	0	1,046	2,242	−282	7,892	36,137 35,083

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

12-INCH, MODEL 1895.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+ over, − short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
68	86	273	8	1,046	2,252	+235	11,650	Richardson.	Hancock	48	July 19, 20
68	86	273	8	1,046	2,252	+158	11,200				
68	86	273	8	1,046	2,252	+218	10,900				
68	86	273	8	1,046	2,252	+187	10,780				
68	86	273	8	1,046	2,252	+ 95	10,660				
68	86	273	8	1,046	2,252	+ 97	10,310				
68	86	273	8	1,046	2,252	+125	10,230				
68	75	273	8	1,046	2,252	+295	10,900	do	do	48	July 20.
68	75	273	8	1,046	2,252	+115	10,750				
68	75	273	8	1,046	2,252	+ 90	10,640				
68	75	273	8	1,046	2,252	+ 83	10,560				
68	75	273	8	1,046	2,252	+115	10,440				
68	75	273	8	1,046	2,252	+250	10,380				
68	75	273	8	1,046	2,252	+280	10,320				
82	84	276	0	1,046	2,228	−244	7,800	Wheeler	Mills	70	Apr. 26
82	84	276	0	1,046	2,228	+173	7,740				
82	84	276	0	1,046	2,228	−151	7,590				
82	84	276	0	1,046	2,228	− 33	7,560				
82	84	276	0	1,046	2,228	−297	7,470				
82	84	276	0	1,046	2,228	+ 38	7,450				
82	84	276	0	1,046	2,228	+ 11	7,270				
81	81	276	0	1,046	2,230	0	6,190	do	do	70	Apr. 29
81	81	276	0	1,046	2,230	+117	5,800				
81	81	276	0	1,046	2,230	+198	5,650				
81	81	276	0	1,046	2,230	+ 98	5,580				
81	81	276	0	1,046	2,230	+ 57	5,490				
81	81	276	0	1,046	2,230	+159	5,440				
81	81	276	0	1,046	2,230	+ 7	5,200				
80	86	272	0	1,046	2,179	+ 64	6,640	Cheney	do	86	Apr. 26
80	86	272	0	1,046	2,179	+184	6,620				
80	86	272	0	1,046	2,179	0	6,580				
80	86	272	0	1,046	2,179	−314	6,540				
80	86	272	0	1,046	2,179	− 88	6,540				
80	86	272	0	1,046	2,179	+167	6,480				
80	86	272	0	1,046	2,179	+212	6,480				
80	82	272	0	1,046	2,189	+ 65	6,150	do	do	86	Apr. 29
80	82	272	0	1,046	2,189	+ 87	6,070				
80	82	272	0	1,046	2,189	+204	5,990				
80	82	272	0	1,046	2,189	+ 2	5,970				
80	82	272	0	1,046	2,189	+ 23	5,900				
80	82	272	0	1,046	2,189	+ 2	5,760				
80	82	272	0	1,046	2,189	+190	5,660				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

12-INCH, MODEL 1895—Continued.

Lot of powder.	Trial shots.							
	Temperature.		Weight.					
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
P. A., No. 1, 1909	81	80	272	0	1,046	2,180	−200	8,110	33,100 33,100
	81	80	272	0	1,046	2,180	−235	8,110	33,100 33,100
	81	80	272	0	1,046	2,180	−210	8,110	33,000 33,000
Du Pont, No. 24, 1910	78	84	268	7¾	1,045	2,268	−650	9,940	32,114 32,352
	78	84	268	7¾	1,045	2,268	−780	9,940	32,114 32,352
	78	84	268	7¾	1,045	2,268	−695	9,940	32,114 32,755
P. A., No. 36, 1910	66	75	270	13	1,046	2,170	+260	7,000	36,000 35,500
	66	75	270	13	1,046	2,170	+465	7,000	41,400 40,100
	66	75	270	13	1,046	2,170	+295	7,000	37,640 37,210

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

12-INCH, MODEL 1895—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+ over, − short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
86	92	272	0	1,046	2,135	+ 42	6,440				
86	92	272	0	1,046	2,135	+ 12	6,370				
86	92	272	0	1,046	2,135	+215	6,310				
86	92	272	0	1,046	2,135	− 74	6,270	Crockett	Mills	90	Apr. 26
86	92	272	0	1,046	2,135	− 27	6,240				
86	92	272	0	1,046	2,135	+ 3	6,190				
86	92	272	0	1,046	2,135	− 60	6,140				
85	81	272	0	1,046	2,125	+452	6,540				
85	81	272	0	1,046	2,125	+177	6,480				
85	81	272	0	1,046	2,125	+ 2	6,440				
85	81	272	0	1,046	2,125	+377	6,360	do	do	90	Apr. 29
85	81	272	0	1,046	2,125	+490	6,330				
85	81	272	0	1,046	2,125	+ 35	6,250				
85	81	272	0	1,046	2,125	+300	6,110				
78	84	268	7¾	1,046	2,156	+ 60	10,260				
78	84	268	7¾	1,046	2,156	+ 18	10,110				
78	84	268	7¾	1,046	2,156	− 79	9,970				
78	84	268	7¾	1,046	2,156	− 39	9,970	De Russy	Monroe	166	July 12
78	84	268	7¾	1,046	2,156	−145	9,890				
78	84	268	7¾	1,046	2,156	+115	9,830				
78	84	268	7¾	1,046	2,156	− 68	9,130				
75	93	268	7¾	1,046½	2,148	+ 94	6,820				
75	93	268	7¾	1,045½	2,148	−143	6,720				
75	93	268	7¾	1,045	2,148	+ 57	6,660				
75	93	268	7¾	1,045	2,148	−108	6,630	do	do	166	July 16
75	93	268	7¾	1,045	2,148	+ 69	6,600				
75	93	268	7¾	1,045	2,148	+ 8	6,600				
75	93	268	7¾	1,045	2,148	+ 46	6,470				
66	75	270	13	1,046	2,238	+ 37	6,740				
66	75	270	13	1,046	2,238	Lost	6,685				
66	75	270	13	1,046	2,238	Lost	6,525				
66	75	270	13	1,046	2,238	+220	6,515	Pensacola	Pickens	77	Apr. 28
66	75	270	13	1,046	2,238	Lost	6,420				
66	75	270	13	1,046	2,238	+237	6,320				
66	75	270	13	1,046	2,238	0	6,175				
68	79	270	13	1,046	2,242	+177	8,810				
68	79	270	13	1,046	2,242	+ 82	8,250				
68	79	270	13	1,046	2,242	+161	8,125				
68	79	270	13	1,046	2,242	+216	8,040	do	do	77	Apr. 30
68	79	270	13	1,046	2,242	+113	7,945				
68	79	270	13	1,046	2,242	− 7	7,845				
68	79	270	13	1,046	2,242	+ 38	7,795				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

12-INCH, MODEL 1895—Continued.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+ over, − short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
P. A., No. 68, 1911	69	68	264	4	1,046	2,130	Lost.	8,950	34,000 34,000
	69	68	264	4	1,046	2,130	+100	8,950	32,500 34,000
	69	68	264	4	1,046	2,130	+100	8,950	33,000 33,000
Du Pont, No. 85, 1911	59	68	266	6	1,040	2,230	− 12	7,540	35,286 32,078
	59	68	266	6	1,040	2,230	−256	7,540	33,330 33,340
	59	68	266	6	1,040	2,230	+134	7,540	36,081 34,200
Do	68	79	265	14	1,046	2,200	−360	9,995	32,300
	68	79	265	14	1,046	2,200	−250	9,995	33,000
	68	79	265	14	1,046	2,200	−300	9,995	33,300

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

12-INCH, MODEL 1895—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
69	68	264	4	1,046	2,147	+295	11,020	Palmer	Michie	79	Aug. 27
69	68	264	4	1,046	2,147	+332	10,950				
69	68	264	4	1,046	2,147	0	10,870				
69	68	264	4	1,046	2,147	+436	10,810				
69	68	264	4	1,046	2,147	0	10,520				
69	68	264	4	1,046	2,147	+ 37	10,490				
69	68	264	4	1,046	2,147	− 52	10,460				
69	70	264	4	1,046	2,147	+114	6,000	do	do	79	Do.
69	70	264	4	1,046	2,147	+165	5,750				
69	70	264	4	1,046	2,147	+103	5,650				
69	70	264	4	1,046	2,147	+208	5,600				
69	70	264	4	1,046	2,147	+155	5,500				
69	70	264	4	1,046	2,147	+ 90	5,400				
69	70	264	4	1,046	2,147	+ 82	5,340				
59	70	266	6	1,040	2,237	+ 41	10,790	Blair	Williams	49	July 6
59	70	266	6	1,040	2,237	+143	10,700				
59	70	266	6	1,040	2,237	+198	10,700				
59	70	266	6	1,040	2,237	+288	10,630				
59	70	266	6	1,040	2,237	+156	10,620				
59	70	266	6	1,040	2,237	+325	10,500				
59	70	266	6	1,040	2,237	+117	10,580				
59	72	266	6	1,040	2,248	+180	8,530	do	do	49	Do.
59	72	266	6	1,040	2,248	+ 49	8,470				
59	72	266	6	1,040	2,248	+ 33	8,420				
59	72	266	6	1,040	2,248	−288	8,350				
59	72	266	6	1,040	2,248	+153	8,290				
59	72	266	6	1,040	2,248	+117	8,250				
59	72	266	6	1,040	2,248	−104	8,150				
68	79	265	14	1,046	2,153	− 49	9,475	Richardson.	Hancock	114	July 27
68	79	265	14	1,046	2,153	+102	9,445				
68	79	265	14	1,046	2,153	− 5	9,430				
68	79	265	14	1,046	2,153	+164	9,400				
68	79	265	14	1,046	2,153	+ 16	9,345				
68	79	265	14	1,046	2,153	+176	9,320				
68	79	265	14	1,046	2,153	− 48	9,300				
68	81	265	14	1,046	2,150	− 15	7,520	do	do	114	July 28
68	81	265	14	1,046	2,150	+ 76	7,450				
68	81	265	14	1,046	2,150	+ 92	7,340				
68	81	265	14	1,046	2,150	+ 59	7,375				
68	81	265	14	1,046	2,150	+ 92	7,340				
68	81	265	14	1,046	2,150	+ 26	7,300				
68	81	265	14	1,046	2,150	+ 90	7,200				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

12-INCH, MODEL 1895—Continued.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
Du Pont, No. 85, 1911	67½	73	265	14	1,046	2,245	+ 770	10,495	32,530 31,400
	67½	73	265	14	1,046	2,245	+ 575	10,495	32,530 31,400
	67½	73	265	14	1,046	2,245	+ 430	10,495	32,250 32,500
Du Pont, H-116, 1913	61	58	270	0	1,046	2,232	− 520	6,715	34,530 34,700
	61	57	270	0	1,046	2,232	+ 320	6,715	34,700 39,940
	61	58	270	0	1,046	2,232	+ 430	6,715	39,220 39,520
P. A., No. 165, 1914	70	64	268	12½	1,046	2,250	−1,100	10,000	(1)
	70	64	268	12½	1,046	2,250	− 990	10,000	(1)
	70	64	268	12½	1,046	2,250	− 950	10,000	(1)

[1] None recorded.

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

12-INCH, MODEL 1895—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*				
67½	73	265	14	1,046	2,150	− 54	10,255	Richardson.	Hancock	122	July 26
67½	73	265	14	1,046	2,150	+239	10,180				
67½	73	265	14	1,046	2,150	+ 36	10,160				
67½	73	265	14	1,046	2,150	+ 31	10,112				
67½	73	265	14	1,046	2,150	+ 23	10,110				
67½	73	265	14	1,046	2,150	+ 16	9,855				
67½	73	265	14	1,046	2,150	+ 64	9,835				
68	81	265	14	1,046	2,151	+ 28	7,230	do	do	122	July 28
68	81	265	14	1,046	2,151	− 83	7,150				
68	81	265	14	1,046	2,151	+ 90	7,100				
68	81	265	14	1,046	2,151	+ 5	7,020				
68	81	265	14	1,046	2,151	+ 35	6,970				
68	81	265	14	1,046	2,151	− 21	6,890				
68	81	265	14	1,046	2,151	+102	6,840				
61	57	270	0	1,046	2,247	−146	6,825	Kinzie	Worden	63	July 14
61	57	270	0	1,046	2,247	+ 37	6,795				
61	57	270	0	1,046	2,247	−817	6,875				
61	57	270	0	1,046	2,247	+402	6,905				
70	64	268	12½	1,046	2,080	− 32	9,900	Richardson.	Hancock	53	Aug. 6
70	64	268	12½	1,046	2,080	+ 33	9,810				
70	64	268	12½	1,046	2,080	+ 50	9,790				
70	64	268	12½	1,046	2,080	− 65	10,080				
70	64	248	12½	1,046	2,080	−103	10,060				
70	64	268	12½	1,046	2,080	− 80	10,010				
70	64	268	12½	1,046	2,080	−116	10,000				
70	81	268	12½	1,046	2,080	−145	9,360	do	do	53	Aug. 10
70	81	268	12½	1,046	2,080	− 48	9,315				
70	81	268	12½	1,046	2,080	+ 82	9,305				
70	81	268	12½	1,046	2,080	+ 77	9,270				
70	81	268	12½	1,046	2,080	+ 43	9,255				
70	81	268	12½	1,046	2,080	+ 66	9,220				
70	81	268	12½	1,046	2,080	+145	9,210				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

12-INCH, MODEL 1895—Continued.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
P. A., No. 165, 1914.....	75	85	268	0	1,046	2,220	−1,260	9,500	(1)
	75	85	268	0	1,046	2,220	− 690	9,500	(1)
	75	85	268	0	1,046	2,220	− 730	9,500	(1)
COMPOUND BLENDING.									
C. P. W., No. 8, 1902....	60	62	265	8	1,046	2,200	− 85	9,625	36,760 35,660
Du Pont, No. 55, 1907...	60	62	265	8	1,046	2,200	− 25	9,625	38,105 37,920
L. & R., No. 8, 1908.....	60	62	265	8	1,046	2,200	− 135	9,625	37,836 36,600
Int., No. 3, 1904.....	70	73	270	5½	1,045	2,200	− 460	10,010	30,400 30,350
P. A., No. 31, 1910.....	70	73	270	5½	1,045	2,200	− 305	10,010	30,350 31,000
Du Pont, No. 85, 1913...	70	73	270	5½	1,045	2,200	− 200	10,010	31,150 32,550

[1] None recorded.

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

12-INCH, MODEL 1895—Continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*				
75	85	268	0	1,046	2,091	+ 19	8,720	Richardson.	Hancock	82	Aug. 14, 16.
75	85	268	0	1,046	2,091	+ 56	8,700				
75	85	268	0	1,046	2,091	+ 50	8,700				
75	71	268	0	1,046	2,091	+ 64	9,640				
75	71	268	0	1,046	2,091	+140	9,600				
75	71	268	0	1,046	2,091	+ 10	9,310				
75	71	268	0	1,046	2,091	+195	9,250				
75	84	268	0	1,046	2,091	− 40	7,980	do	do	82	Aug. 16
75	84	268	0	1,046	2,091	+130	7,940				
75	84	268	0	1,046	2,091	+245	7,920				
75	84	268	0	1,046	2,091	+113	7,890				
75	84	268	0	1,046	2,091	+123	7,850				
75	84	268	0	1,046	2,091	+ 65	7,820				
75	84	268	0	1,046	2,091	0	7,800				

COMPOUND BLENDING.

60	63	265	8	1,046	2,187	+643	9,985	Kinzie	Worden	63	July 6
60	63	265	8	1,046	2,187	+266	9,955				
60	63	265	8	1,046	2,187	+743	10,085				
60	63	265	8	1,046	2,187	+378	10,085				
60	63	265	8	1,046	2,187	+349	10,165				
60	63	265	8	1,046	2,187	+296	10,135				
60	63	265	8	1,046	2,187	+656	10,275				
70	78	270	5½	1,045	2,150	− 47	10,050	Richardson.	Hancock	84	Aug. 10
70	78	270	5½	1,045	2,150	+100	10,030				
70	78	270	5½	1,045	2,150	− 8	10,000				
70	78	270	5½	1,045	2,150	+ 48	9,970				
70	78	270	5½	1,045	2,150	+200	9,960				
70	78	270	5½	1,045	2,150	+ 52	9,950				
70	78	270	5½	1,045	2,150	−190	9,910				
70	80	270	5½	1,045	2,150	+ 99	7,360	do	do	84	Do.
70	80	270	5½	1,045	2,150	− 95	7,250				
70	80	270	5½	1,045	2,150	+245	7,210				
70	80	270	5½	1,045	2,150	+127	7,150				
70	80	270	5½	1,045	2,150	+105	7,085				
70	80	270	5½	1,045	2,150	− 5	7,030				
70	80	270	5½	1,045	2,150	+203	6,720				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

12-INCH, MODEL 1895—Continued.

COMPOUND BLENDING—continued.

Lot of powder.	Trial shots.				Velocity assumed.	Projectiles struck (+over, —short).	Range to target.	Pressure.
	Temperature.		Weight.					
	Powder charges.	Atmosphere.	Powder charges (without igniter).	Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
Int., No. 12, 1908	80	80	272	12	1,046	2,270	— 440	10,000	33,500 33,200
Int., No. 30, 1910	80	80	272	12	1,046	2,270	— 220	10,000	37,366 36,516
	80	80	272	12	1,046	2,270	— 220	10,000	36,807
L. & R., No. 10, 1910	58	74	263	13	1,044	2,207	—1,070	10,000	32,000
Du Pont, H—55, 1911	58	74	263	13	1,044	2,207	— 855	10,000	32,100
	58	74	263	13	1,044	2,207	—1,130	10,000	32,100

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

12-INCH, MODEL 1895—Continued.

COMPOUND BLENDING—continued.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+ over, − short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*				
80	80	272	12	1,046	2,224	+ 46	10,260				
80	80	272	12	1,046	2,224	+306	10,220				
80	80	272	12	1,046	2,224	+133	10,150				
80	80	272	12	1,046	2,224	+ 40	10,130	Selfridge..	Kamehameha	75	July 21
80	80	272	12	1,046	2,224	+336	10,070				
80	80	272	12	1,046	2,224	+136	10,030				
80	80	272	12	1,046	2,224	+174	9,980				
80	78	272	12	1,046	2,224	+500	8,260				
80	78	272	12	1,046	2,224	+460	8,270				
80	78	272	12	1,046	2,224	+470	8,420				
80	78	272	12	1,046	2,224	+450	8,430	....do....	.....do.....	75	July 23
80	78	272	12	1,046	2,224	+450	8,880				
80	78	272	12	1,046	2,224	+300	8,920				
80	78	272	12	1,046	2,224	+390	9,090				
58	64	263	13	1,044	2,053	−149	9,775				
58	64	263	13	1,044	2,053	−124	9,680				
58	64	263	13	1,044	2,053	−139	9,625				
58	64	263	13	1,044	2,053	−234	9,550	Butterfield	H. G. Wright.	134	Aug. 18
58	64	263	13	1,044	2,053	−257	9,450				
58	64	263	13	1,044	2,053	−130	9,580				
58	64	263	13	1,044	2,053	− 97	9,580				
58	73	263	13	1,044	2,053	− 21	5,770				
58	73	263	13	1,044	2,053	+120	5,770				
58	73	263	13	1,044	2,053	+133	5,790				
58	73	263	13	1,044	2,053	+157	5,840	....do....	.....do.....	134	Aug. 19
58	73	263	13	1,044	2,053	+115	5,880				
58	73	263	13	1,044	2,053	+167	5,920				
58	73	263	13	1,044	2,053	+150	5,990				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

12-INCH, MODEL 1900.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
L. & R., No. 2, 1907	?	73	339	10	1,049	2,250	+110	11,150	32,000
	?	73	339	10	1,049	2,250	− 10	11,150	31,465
	?	73	339	10	1,049	2,250	− 20	11,150	31,090
P. A., No. 58, 1912	71	78	294	0	1,046	2,250	−300	10,500	26,888 28,030
	71	86	294	0	1,046	2,250	−350	10,500	26,046 29,269
	71	86	294	0	1,046	2,250	−280	10,500	25,888 28,063

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

12-INCH, MODEL 1900.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+ over, — short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	Lbs.	Ozs.	Lbs.	Ft.-sec.	Yds.	Yds.				
?	73	339	10	1,051	2,254	+152	11,300	Wheaton..	Wetherill ..	117	Aug. 17
?	73	339	10	1,051	2,254	— 67	9,870				
?	73	339	10	1,051	2,254	+116	9,810				
?	73	339	10	1,051	2,254	+137	9,830				
?	73	339	10	1,051	2,254	+152	9,810				
?	73	339	10	1,051	2,254	+ 90	9,520				
?	73	339	10	1,051	2,254	+145	9,590				
?	69	339	10	1,051	2,254	+285	6,540	....do.....	.....do.....	117	Do.
?	69	339	10	1,051	2,254	+ 38	6,540				
?	69	339	10	1,051	2,254	+215	6,470				
?	69	339	10	1,051	2,254	+290	6,420				
?	69	339	10	1,051	2,254	+116	6,390				
?	69	339	10	1,051	2,254	+ 79	6,330				
?	69	339	10	1,051	2,254	+258	6,190				
71	82	294	0	1,046	2,193	— 42	11,070	Parrott....	Monroe.....	69	July 14
71	82	294	0	1,046	2,193	+ 56	11,000				
71	82	294	0	1,046	2,193	+ 20	10,970				
71	82	294	0	1,046	2,193	+ 82	10,890				
71	82	294	0	1,046	2,193	— 26	10,850				
71	82	294	0	1,046	2,193	+ 67	10,750				
71	82	294	0	1,046	2,193	— 48	10,740				
74	87	294	0	1,046	2,193	— 15	6,465	....do.....	.....do.....	69	July 16
74	87	294	0	1,046	2,193	— 23	6,410				
74	87	294	0	1,046	2,193	+ 43	6,290				
74	87	294	0	1,046	2,193	— 9	5,930				
74	87	294	0	1,046	2,193	+ 73	5,885				
74	87	294	0	1,046	2,193	— 56	5,840				
74	87	294	0	1,046	2,193	+ 47	5,800				

List showing velocities assumed for the different lots of powder and 10-inch, 12-inch, and

14-INCH, MODEL 1907.

Lot of powder.	Trial shots.					Velocity assumed.	Projectiles struck (+over, −short).	Range to target.	Pressure.
	Temperature.		Weight.						
	Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.				
	°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*	*Lbs.*
Du Pont, No. 88, 1911 ...	79	73	337	0	1,660	2,150	−280	10,540	33,500 31,000
	79	73	337	0	1,660	2,150	+360	10,540	38,000 38,500
	79	73	337	0	1,660	2,150	−260	10,540	33,500

results obtained from same during target practice, 1915, with 8-inch, 14-inch guns—Continued.

14-INCH, MODEL 1907.

Record shots.											
Temperature.		Weight.									
Powder charges.	Atmosphere.	Powder charges (without igniter).		Projectiles.	Velocity used.	Projectiles struck (+over, −short).	Range to target.	Battery.	Fort.	Company.	Date of record shots, 1915.
°	°	*Lbs.*	*Ozs.*	*Lbs.*	*Ft.-sec.*	*Yds.*	*Yds.*				
79	91	337	0	1,660	2,140	−252	10,640	Randolph.	De Russy	10	July 19
79	91	337	0	1,660	2,140	−478	10,670				
79	91	337	0	1,660	2,140	−534	10,710				
79	91	337	0	1,660	2,140	−408	10,800				
79	91	337	0	1,660	2,140	−454	10,880				
79	91	337	0	1,660	2,140	−638	10,940				
79	91	337	0	1,660	2,140	−534	11,070				
79	77	337	0	1,660	2,085	+180	7,450	....do.....	.....do.....	10	July 22
79	77	337	0	1,660	2,085	+297	7,490				
79	77	337	0	1,660	2,085	+ 81	7,500				
79	77	337	0	1,660	2,085	+106	8,370				
79	77	337	0	1,660	2,085	+293	8,430				
79	77	337	0	1,660	2,085	+296	8,610				
79	77	337	0	1,660	2,085	+ 75	8,750				